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Theo Burchard

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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/528,392 | Applicant(s) BURCHARD ET AL. | |
| | Examiner DENNIS CORDRAY | Art Unit 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. By this Office Action, the finality of the previous Final Office Action, mailed 11/10/2008, is hereby vacated and prosecution is reopened. Claims 28-30 of the aforementioned Final Office Action were included in rejections over references that fail to disclose extruding the plastic foil onto the paper layer. The rejections herein have been modified to include claims 28-30 in the intended rejections.

Response to Arguments

2. Applicant argues that combining Patzold et al and Tamagawa et al would not result in the claimed subject matter because:

Tamagawa et al discloses a support for photographic paper coated on both sides with polyethylene layers having a thickness of 15-40 μm per side, and a photosensitive layer on top of the plastic (presumably polyethylene) layer;

Patzold et al discloses cards having a photographic paper welded between two clear foils, which are attached to the surface of the photographic material so that the information carrier (photographic paper) is not accessible, the foils having a thickness from 15-250 μm ; and

combining the references would result in the total thickness of the plastic foil of at least 30 μm .

The claims require a multilayer substrate comprising at least one paper layer laminated on both sides all over to plastic foil. The plastic foil has a thickness of 1-20 micrometers. The claims require at least a plastic foil having a thickness of 1-20

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micrometers, but do not preclude additional plastic layers or foils or limit the thickness of additional plastic layers.

Patzold et al discloses an information carrier in the form of a photographic material carrying information and laminated on both sides to at least one transparent foil having the claimed thickness (reads on the claimed plastic foil) by means of a layer of adhesive. The information carrier generally comprises a light sensitive silver halide emulsion layer on a support that can be paper or polyolefine laminated paper (col 1, line 61-65; col 3, lines 31-50). Tamagawa et al was only used to teach that polyolefin laminated photographic supports can have a basis weight overlaying the claimed range.

Applicant argues that the inventive security papers are creasable and foldable and have the feel and sound of paper, and that the modified product of Patzold et al in view of Tamagawa et al would not have these properties. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.").

Any paper can be creased or folded. The meaning of "have the feel and sound of paper" is not clear, as was discussed in the Final Office Action mailed 11/10/2008, and one of ordinary skill in the art would have no basis for determination of whether or not a paper has the argued characteristics. In addition, the modified paper of Patzold et

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al in view of Tamagawa et al has the structure of the security paper as claimed, thus obtaining the claimed properties would have been obvious.

Patzold et al discloses that a variety of security features can be incorporated into the paper layer and/or the outer foil without detailing the specifics of the features (col 4, lines 20-41). Tooth and Howland supply more detailed discussion of multiple security features well known to those of ordinary skill in the art that are incorporated into security papers. Tooth and Howland were not relied upon to teach the thickness of the protective plastic foil. Haylock was used only to provide evidence that cotton fibers are a typical source of annual fibers used in papermaking.

Hoeppner et al and Hoffman were also not relied upon to teach the thickness of the protective plastic foil.

The outstanding rejections over the cited prior art are maintained but have been modified as discussed above to include claims 28-30 in the intended rejections. In addition, Claim 18 has been rejected separately in a new ground of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3, 5, 8-10, 13 and 24-26 are rejected under 35 U.S.C. 103(a) as unpatentable over Patzold et al (4455359) in view of Tamagawa et al (4830928).

Patzold et al discloses a tamper proof document comprising a photographic information carrier, the carrier comprising a paper or polyolefin laminated paper and

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photographic emulsion layer. The carrier is laminated on both sides all over to a transparent plastic foil by means of an adhesive layer (Abs; col 1, lines 1-15 and 61-65; col 3, lines 31-50; col 4, lines 4-8; col 6, line 61 to col 7, line 2). The plastic foil has a thickness from 15 to 250 mm (col 4, lines 61-63), which overlays the claimed ranges. The document has security features in the foil and/or in the paper layer, such as printed images, writing, embossing, watermarks (in the paper layer), magnetically or optically readable data, etc. (col 4, lines 15-35). Any paper can be folded or creased. The foils on opposing sides of the paper are under different strains when the paper is folded or creased (one side under compressive strain and the other side under tensile strain) or, at least, different strains would have been obvious to one of ordinary skill in the art.

Patzold et al discloses that the document is intended to contain information relating to the owner and, in some embodiments, may be used for credit or cash free transactions, thus is a value document (col 1, lines 6-15). Alternatively, making a value document would at least have been obvious to one of ordinary skill in the art.

Patzold et al does not disclose the claimed paper layer weight.

Tamagawa et al discloses a photographic paper support comprising a base paper containing a cationic softening agent and a polyethylene coating on both sides of the paper and preferably comprising a surface sizing (Abs; col 2, lines 3-21). The support has improved surface smoothness and is free of troubles such as blackening and cockling. The base paper has a basis weight of 80-200 g/m² (col 3, lines 39-41).

The art of Patzold et al and the instant invention is analogous as pertaining to security papers and value documents. The art of Patzold et al and Tamagawa et al is

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analogous as pertaining to photographic papers. Patzold et al discloses a security or value document comprising a photographic paper. Tamagawa et al discloses an improved photographic paper. It would have been obvious to one of ordinary skill in the art to use a photographic paper having the claimed basis weight and having a softening agent in the product of Patzold et al in view of Tamagawa et al to obtain the advantages disclosed by Tamagawa et al.

4. Claims 2, 4, 6, 7, 14-16, 20-22 and 27 are rejected under 35 U.S.C. 103(a) as unpatentable over Patzold et al in view of Tamagawa et al and further in view of Howland et al (5868902) and Tooth et al (4462866) and as evidenced by Haylock (Paper, Its making, merchanting and usage).

The disclosures of Patzold et al and Tamagawa et al are used as above. Patzold et al also discloses a method step of laminating a plastic film to both surfaces of a paper all over (col 6, lines 30-33 and 61-68; col 7, lines 1 and 2). Tamagawa et al discloses that a common Fourdrinier paper machine may be used as a sheet forming apparatus (col 3, lines 32-33).

Patzold et al and Tamagawa et al do not disclose that the paper layer is interrupted, the use of intaglio printing, the kind of fibers used in the paper, that the foil is already equipped with a security feature or equipped therewith after application, that the foil is printed after application or that the document is a bank note or check.

Claims 2, 6, 7, 14, 21 and 27: Howland et al discloses a security paper comprising a plastic film applied to both surfaces and method of making the paper, the

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method comprising producing the paper in a paper machine from natural and/or synthetic fibers, drying the paper and then coating the paper on both surfaces with a coating containing polyurethane. The coating forms a film, or thin layer or foil, that provides chemical and mechanical protection for the paper (Abs; col 2, lines 17-24; col 4, lines 1-7; col 4, line 28 to col 5, line 5; cols 5-9, Examples).

Howland discloses that the paper layer comprises a security feature, such as a watermark and/or embedded or windowed security thread which incorporates visual or covert security elements (col 4, lines 16-19). Such windowed areas are typically made by preventing deposition of fibers in the area of each of the windows during paper manufacture so that an embedded security thread is visible in the windows (see Tooth et al, col 2, lines 49-62; col 6, lines 27-46, Figs 6a and 6b). The paper layer is interrupted where the window occurs.

In some embodiments, the coating comprises an iridescent, phosphorescent or fluorescent pigment or magnetic particles as security features thus is already equipped with security features (col 3, lines 32-61). In other embodiments, a foil, hologram or kinogram is affixed to the paper after it is made and coated (applied to the film after application to the paper), either before or after printing (Claims 1, 16 and 17).

Howland does not disclose laminating the plastic foil to the paper.

Tooth et al discloses a security paper comprising a paper layer having a watermark and an embedded security thread visible in windows formed in the paper (Abs; col 3, lines 6-19). The security paper comprises a plastic film overlay covering the whole of one or more surfaces. The overlay can be a plastic film that is adhered to the

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paper by an adhesive (laminated) or an overlay applied as a liquid that subsequently forms a film adherent to the surface by evaporation of the solvent or polymerization and curing in situ (col 3, lines 28-56). Thus it is known in the art to apply preformed films or foils (obviously self-supporting) to a security paper or to form the films from a liquid applied to the paper as functionally equivalent options.

The art of Patzold et al, Tamagawa et al , Howland et al, Tooth et al and the instant invention is analogous as pertaining to making security papers comprising a paper layer with a plastic foil layer on each side. It would have been obvious to one of ordinary skill in the art to make a paper layer on a papermaking machine from natural and/or synthetic fibers in the process and paper of Patzold et al in view of Tamagawa et al and further in view of Howland et al and Tooth et al as a typical papermaking process. Cotton would have been obvious to one of ordinary skill in the art as a typical source of natural annual fibers (if evidence is needed, see Haylock, p 22). Providing a window interrupting the paper layer in which a security element is visible would have been obvious as a well known security feature of such papers.

Claims 4, 15 and 16: Howland et al discloses printing the coated paper via intaglio printing (col 4, lines 53-54; col 5, lines 6-9; col 5, lines 61-62, Example 1). Although not explicitly disclosed, printing images, words and/or indicia by intaglio printing would have been obvious to one of ordinary skill in the art as functionally equivalent options for adding information to the paper.

Claims 20 and 22: Howland et al discloses that the paper can be a banknote, identification document, driving license, passport, etc. (col 5, lines 10-12). Tooth et al

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discloses that the paper can be a banknote, cheque, identity card, credit card, etc.(col 3, lines 62-66). Making a banknote would have been obvious as a typical end product of such security papers.

5. Claims 11, 12, 17 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patzold et al in view of Tamagawa et al and further in view of Hoeppner et al (US 2002/0022112).

The disclosures of Patzold et al and Tamagawa et al are used as above. Patzold et al and Tamagawa et al do not disclose extrusion or cold lamination of a film to the paper layer. Patzold et al and Tamagawa et al also do not disclose that security features are in register with one another or form a combined information pattern.

Hoeppner et al discloses a multilayer security or value document and process for making, the process comprising printing a paper on one or both sides, then extruding a plastic film layer to one or both sides of the paper. The extruded film comprises laser active pigments that permit subsequent personalization with a laser. The paper thus coated can be printed and/or embossed with various additional security features, and further marked, engraved or perforated using a laser (Abs; p 1, pars 14 and 16; p 3, pars 40-45). The coated and printed papers can be coated with an adhesive and further laminated with an upper and lower covering film, the surface of which can be embossed and/or printed with security colors (p 3, pars 46-49). Heat is not required, thus the films are cold-laminated. The different layers have different properties, such as being doped,

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being sensitive to laser light, having integrated security features or materials, etc. (p 2, par 29).

Hoeppner et al discloses advantages of the extrusion and lamination processes that include accurate register of the various security features in the layers (p 1, par 13; p 2, pars 22-24; p 3, par 54). Hoeppner et al teaches that joining the layers in accurate register with one another is required in a security document. The security features in the layers thus form a combined information pattern.

The art of Patzold et al, Tamagawa et al, Hoeppner et al and the instant invention is analogous as pertaining to applying plastic films to paper substrates and the manufacture of multilayered security papers. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a plastic layer to the paper layer of Patzold et al in view of Tamagawa et al and further in view of Hoeppner et al by extrusion or by cold lamination using an adhesive to provide accurately registered layers in which security features in the layers are in register with, or complement, one another to form a combined information pattern. The motivation would have been to provide products consistent in appearance and easily identified but that are difficult to forge due to multiple security features.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patzold et al in view of Tamagawa et al and further in view of Hoeppner et al and even further in view of Rivlin et al (US 5686180).

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The disclosures of Patzold et al, Tamagawa et al and Hoeppner et al are used as above.

Patzold et al, Tamagawa et al and Hoeppner et al do not disclose a water soluble adhesive. Patzold et al discloses that an object of the invention is that the plastic foils cannot be removed and the information on the information carrier is not accessible without destruction of the information carrier (col 1, lines 51-60).

Rivlin et al discloses a water-activated adhesive containing a primary water-soluble adhesive agent, an adhesion promoter and a water soluble polymer comprising an imine compound in an amount sufficient to provide adhesion to polymeric films and preferential anchorage of such film to a substrate, such as paper (Abs; col 2, lines 18-24; col 4, line 66 to col 5, line 2). The adhesive can be formulated to bond a plastic film and a paper such that the film and paper can only be separated with great difficulty and with ripping or damage to the paper substrate (col 3, lines 54-66; col 4, lines 54-58). To bond the paper and plastic, it is only necessary to allow the water component of the adhesive to dry. No heat is required, thus the bonding of the two materials is a cold lamination process. Rivlin et al solves the objective of Patzold et al of adhering a plastic layer to a paper layer so that the plastic layer cannot be removed without destruction of the paper.

The art of Patzold et al, Tamagawa et al, Hoeppner et al, Rivlin et al and the instant invention is analogous as pertaining to laminating plastic films to paper substrates and the manufacture of multilayered paper products. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a plastic

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layer to the paper layer by cold lamination using a water soluble adhesive of Patzold et al in view of Tamagawa et al and further in view of Hoeppner et al and even further in view of Rivlin et al to provide a product in which the information on the information carrier is inaccessible without destruction of the paper.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patzold et al in view of Tamagawa et al and further in view of Hoffman (3489643).

The disclosures of Patzold et al and Tamagawa et al are used as above. Patzold et al and Tamagawa et al do not disclose polyamide fibers.

Hoffman discloses that long undrawn polyamide fibers incorporated into nonwoven papers improve tear strength, resistance to tear propagation, greater elongation to break and improved stretchability (Abs; col 1, lines 61-72; col 2, lines 1-3; col 4, lines 29-31 and 44-50). Papers so made can be used for photographic paper, bank notes, etc. (col 3, lines 25-27).

The art of Patzold et al, Tamagawa et al, Hoffman and the instant invention is analogous as pertaining to the manufacture of photographic papers. It would have been obvious to one of ordinary skill in the art at the time of the invention to use polyamide fibers in the paper layer of Patzold et al in view of Tamagawa et al and further in view of Hoffman to obtain the disclosed improved tear and stretchability properties.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on 571-272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 1791

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